



Allergic contact dermatitis caused by a Brazilian exotic hardwood

Julia E. Cabezas Arteaga  | Daniel L. Marques Gonçalves | Luciana P. Samorano |
Susana L. Chen Wu | Vitor M. Silva Reis

Department of Dermatology, Hospital das Clínicas of the University of São Paulo Medical School, São Paulo, Brazil

Correspondence

Dr Julia E. Cabezas Arteaga, Rua Oscar Freire, 1799. Ap 1102. CEP: 054090-11 São Paulo—SP, Brazil.
Email: julitaelisacabezas@gmail.com

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CASE REPORT

A 53-year-old male presented with lichenified and excoriated plaques mainly on the hands, forearms and face that had been present since the previous year (Figure 1). Past medical history was denied. The patient works as a furniture refinisher, using “peroba-rosa” wood (*Aspidosperma polyneuron*), and denied other possible allergens. A skin

biopsy showed spongiotic dermatitis. Patch testing with the Brazilian Contact Dermatitis Group Standard Series¹ was performed, and showed positive reactions to *Myroxylon pereirae* 10% (balsam of Peru) on day (D) 2 and D4. The patient also had a positive reaction to dust of “peroba-rosa” applied as wood dust wetted with distilled water in an 8-mm aluminium chamber.

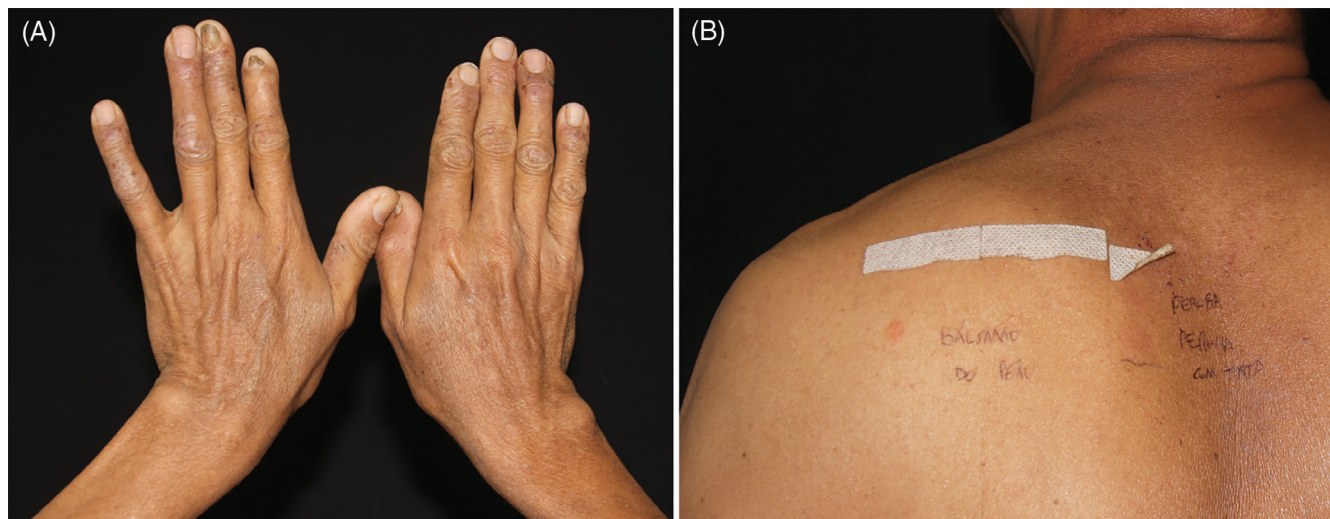


FIGURE 1 (A), Eczema on the dorsal areas of both hands with nail impairment, showing chronicity. (B), Positive patch test reactions (++) to balsam of Peru and *Aspidosperma polyneuron* on day 4, the latter with lacquer and without lacquer

DISCUSSION

The diagnosis of allergic contact dermatitis is based on a combination of the clinical presentation, a meticulous history, and the results of patch testing. In our patient, the confirmed contact allergen was the wood of *A. polyneuron*, an exotic hardwood used in construction and furniture,² related to the patient's job.

A. polyneuron Mueller Argoviensis (Apocynaceae) is a native tree of Brazil, and is typical of the Atlantic forest.² The wood of this species has high commercial value. In the literature, there is a series of reports of cases of contact allergy to *Aspidosperma* sp., found in the wood of an "orange stick" used for manicuring, and in the keyboard of an organ. Jemec and Hausen tested the strong sensitizing potential of this Brazilian wood in guinea-pigs.³

Our patient also had a positive patch test reaction to *M. pereirae*. Possible cross-sensitization between trees could be explained by the composition of woods and barks. *Aspidosperma* sp. contains alkaloids, coumarins, quinones, steroids, triterpenoids, and essential oils.⁴ *M. pereirae* consists of an aromatic liquid derived from the tree bark of *Myroxylon balsamum* that contains cinnamic aldehyde, cinnamic alcohol, eugenol, isoeugenol, vanillin, benzoic acid, and farnesol. Roesyanto et al reported a rate of 27.2% of combined sensitization to wood tars, fragrance mix and *M. pereirae* in a population of 1833 patients with proven allergic contact dermatitis.⁵ The description of which essential oils are found in hardwoods could give an understanding of the allergen that causes the cross-sensitization. Quinone has already been described as a common allergen among exotic woods.^{6,7}

Continuous exposure to an allergen may produce chronic symptoms. It is important to emphasize the utility of the chemical knowledge of plants. Also, a positive patch test reaction to balsam of Peru may be an important clue regarding wood allergy, although identification of the cross-reacting agent was not possible. Finally, patch testing with suspected woods should be performed in woodworkers, to enable subsequent avoidance of the allergens.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

ORCID

Julia E. Cabezas Arteaga  <https://orcid.org/0000-0003-1566-3977>

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